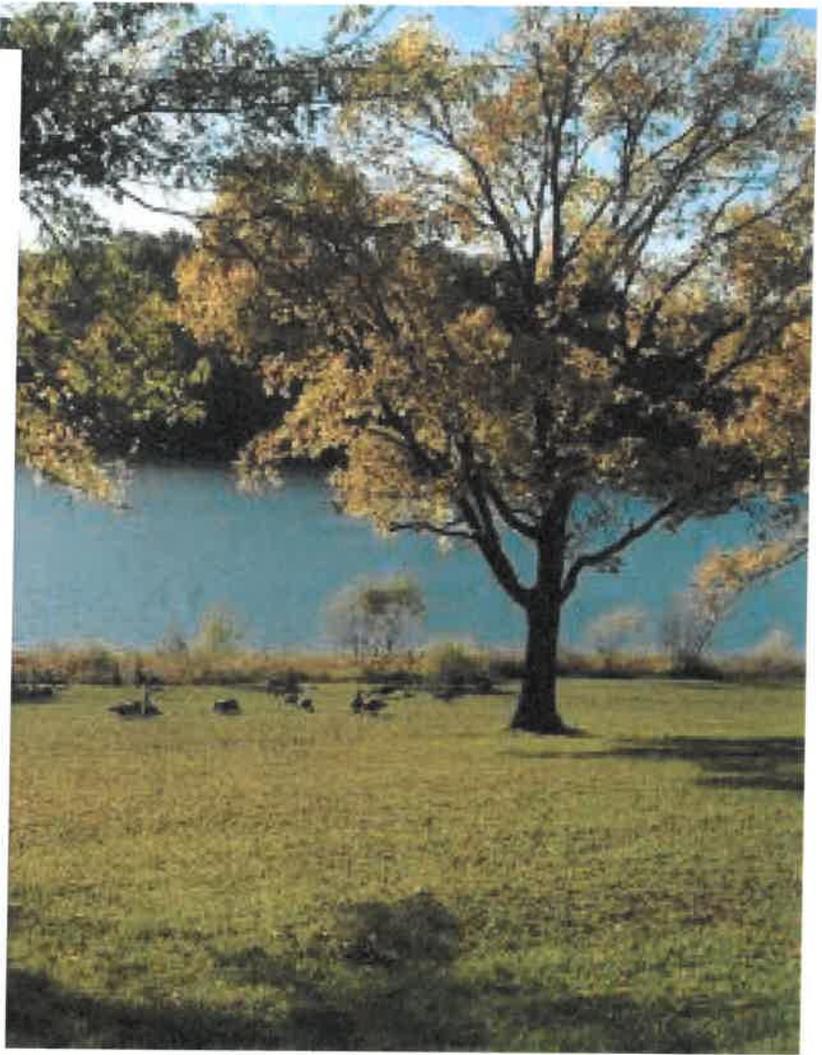


Stormwater Management Plan

Unified Government of Wyandotte County | Kansas City, KS

2012

REVISED 2017



Unified Government of Wyandotte County /
Kansas City, Kansas



Jeff Fisher, Director of Public
Works

2-27-17
Date

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INTRODUCTION

The Unified Government of Wyandotte County/Kansas City, Kansas' (UG) municipal separate storm water system (MS4) Stormwater Management Program (SMP) has been developed in compliance with Kansas Water Pollution Control MS4 Permit and Authorization to Discharge under the National Pollutant Discharge Elimination System (Kansas Permit No. M-MO25-SO01/Federal Permit No. KS0095656).

The SMP is intended to be detailed with respect to procedures and protocols for implementing the stormwater best management programs to ensure UG personnel in the various departments and divisions have ample guidance and instruction. The SMP will also allow the UG to allocate financial resources in an efficient and effective manner, consistent with the objectives of the NPDES permit issued with an effective date of January 1, 2016.

The SMP is a comprehensive program to manage the quality of stormwater discharged from UG's storm sewer system. The content of the SMP is based on the requirements of the KDHE permit for the MS4. The SMP addresses the following permit requirements:

- Public Education and Outreach
- Public Involvement and Participation
- Illicit Discharge Detection and Elimination
- Construction Site Stormwater Runoff Control
- Post-Construction Stormwater Management Program
- Pollution Prevention/Good Housekeeping
- Industrial Activity Stormwater Runoff Management
- Total Maximum Daily Load (TMDL) and Principal Pollutants of Concern BMPs
- Wet Weather Monitoring Program
- Stormwater Management Program Elements

To be successful, the SMP must be easy to understand and implement. Keeping this in mind, it was developed to be clear, simple, and written in such a way that UG staff responsible for stormwater quality can implement program elements. The objective is to ensure that staff understands their responsibilities, and that measurable goals are established to document the effectiveness of the program. As part of the SMP, several Standard Operating Procedures (SOPs), referenced in the document below, have been developed and implemented in a manner that meets the requirements of the Unified Government's MS4 permit. SOPs are internal documents prepared by UG that provide guidance to UG staff as implementation of the permit moves forward. UG will review and update the SOPs as UG updates its programmatic efforts and on an as-needed basis. UG will note any significant updates in the annual reports.

Best management practices (BMPs) have been included in the SMP to reduce pollutants to the maximum extent practicable. Such BMPs may be modified by the Unified Government where appropriate to achieve program objectives and to accommodate the Government's administration of the storm water management program.

Federal regulations (40 CFR 122.26(b)(8)) define a municipal separate storm sewer system (MS4) as: “a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian Tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States; (ii) Designed or used for collecting or conveying storm water; (iii) which is not a combined sewer system; and (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.”

EPA and the state are authorized to regulate discharges from the MS4 owned or operated by UG as a point source under the Clean Water Act. Although some programs may be undertaken for the entire area, the SMP is meant to address the MS4 service area (hereinafter, “service area”). The service area is comprised of those properties that discharge stormwater into the UG stormwater system. It does not include properties that are served by UG’s combined sewer system (largely comprised of areas in the eastern part of the UG geographical area, including, the following watersheds: Fairfax Industrial District, Esplanade Creek, Jersey Creek, Splitlog Creek, Central Industrial District, Muncie Bluff Creek, Armourdale, parts of Argentine, parts of Turkey Creek, Brush Creek, and Matoon Creek). It does not include properties that discharge stormwater into stormwater conveyance systems pursuant to separately-issued NPDES permits, properties that discharge stormwater directly into local waterbodies (direct dischargers), or properties located within the City of Bonner Springs, the City of Edwardsville, within in Delaware Township (unincorporated, not within the urbanized area), and the City of Lake Quivira. UG notes that the service area will be further refined with future updates to the existing maps of the MS4. A map of the current MS4 service area is included in the appendices to this SMP.

2016 UPDATE: KDHE issued a new permit effective January 1, 2016. The UG is currently under a Partial Consent Decree and has chosen to extend the current SMP and all BMPs as it was written in the 2012 SMP to the end of 2017 with the intent of continued compliance with the Partial Consent Decree. BMPs and measurable goals completed prior to 2016 have been paraphrased and noted as completed in this revision. The UG has updated the SMP to include the additional requirements of the permit Part I, A through D and F through I. Other changes in the SMP due to the issuance of a new permit include: corrections to language in Industrial Activity Stormwater Runoff Program measurable goals to be consistent with new permit, extending current program elements to the end of the permit period (December 31, 2019) and changing permit year references (Year 1, Year 2, etc.) to an actual calendar year (20XX). The UG is also adding new BMPs to the existing Public Education and Outreach and IDDE Programs. The UG intends to continue developing those BMPs for implementation beginning in 2018. Per the new permit, the UG shall revise this SMP by February 28, 2017 to address additional requirements in Part I, E.

2017 UPDATE: In accordance with the TMDL Regulated Pollutants Section of the KDHE MS4 permit effective January 1, 2016, the UG has added new two new BMPs (8.C and 8.D) and additional measurable goals to 8.B to reduce TMDL Regulated Pollutants to the Maximum Extent Practicable (MEP). These additions include assessing the level of TMDL Regulated Pollutants from the Brenner Heights Creek,

Little Turkey Creek and Wyandotte Lake watersheds. Brenner Heights Creek and Little Turkey Creek are not themselves impaired but are targeted by the permit to determine the level of reductions in bacteria, nutrients, and sediment entering the Kansas River that can be made through reductions in those watersheds. Sample results in the coming years may indicate that targeting these two watersheds will not produce sufficient reductions in pollutant loadings to the Kansas River. If this is the case, the UG will notify Kansas Department of Health and Environment (hereinafter "KDHE") and work with KDHE to select a new watershed(s) to target as required by the Permit.

MINIMUM CONTROL AND PERFORMANCE MEASURES

1. Public Education and Outreach

As operator of a Phase 1 MS4, the Unified Government (hereinafter "UG") shall identify, schedule, implement, evaluate and modify, as necessary, best management practices that comply with the following overall Public Education and Outreach objectives:

- a. Increase citizen knowledge and awareness of steps that can be taken to reduce stormwater pollution.
- b. Enhance public employees, businesses, and the general public's knowledge of:
 - 1) hazards associated with illegal discharges to local storm sewers which reach area streams
 - 2) improper waste disposal implications
 - 3) legal ramifications
- c. Develop a Public Education and Outreach program which provides a clear and consistent message regarding stormwater issues.
- d. Targeted strategies towards commercial, industrial, institutional entities likely to have significant stormwater impacts.

Best Management Practices (BMPs):

1.A BMP: Gather, prepare and distribute printed educational materials by insertion into BPU water bills and placement at several sites in the service area.

Objective: To educate the general public and new and existing UG employees regarding stormwater quality issues as well as the UG's Stormwater Management Plan through the preparation and distribution of flyers and educational materials.

Measurable Goals:

1.A.1 The UG shall continue to purchase flyers selected from among the following flyers, or their equivalent, from MARC such as: "Build Your Own Rain Barrel", "Keep Sediment Out of Our Water", "Know Your Watershed", "Redirect or Disconnect Your Downspout", "Making and Using Compost", "Oil and Water Don't Mix", "Pick Up After your Pet", "Protect Our Streams", "Storm drain Stewardship", "Use Lawn Chemicals Wisely" and "Wash your Car the Right Way".

1.A.2 The UG shall continue to place the flyers near the elevators on the garage and lobby floor levels of City Hall and in open areas at the Kansas City Kansas Public Library, the Mr. and Mrs. F.L. Schlagle Library, and at nine other public venues which may include the Community Centers, and the Neighborhood Resource Center.

1.A.3 The UG shall continue to prepare envelope inserts designed to educate the general public on several of the key elements of the UG's Stormwater Management Plan (hereinafter "SMP"). The insert shall be bi-lingual (English and Spanish).

1.A.4 The UG shall continue to distribute the envelope inserts described in I.A.3 above in water bills to the approximately 55,500 households in Kansas City, Kansas.

1.A.5 The UG shall provide additional flyers to the locations listed as part of Element 1.A.2 on an as needed basis during the permit term.

Responsible Department(s): Public Works, Public Relations, KCK Public Libraries, Neighborhood Resource Center, Community Centers, Board of Public Utilities (hereinafter "BPU")

Compliance Schedule: –2016 - 2019

Recurrence: Continuous (1.A.1, 1.A.2, 1.A.3, 1.A.4), As Needed (1.A.5).

Report(s): Copy of the materials prepared or procured including a list of the distribution sites.

Evaluation Methodology: Review number and type of materials distributed to evaluate utility and effectiveness of the various distribution methods. Review existing public education materials available to target stormwater management, water quality, and stormwater pollution prevention messages to UG's public and private entities. Investigate future development of additional, targeted education materials specific to the UG's program.

1.B BMP: Deliver televised programs/announcements on stormwater management, surface water quality and how to reduce pollutants to the storm sewer system on the UG's cable access channel.

Objective: To reach as broad and diverse an audience as possible, by using the UG's current cable television access channel to enhance the general public's awareness regarding stormwater issues, to convey basic messages on proper household management for stormwater pollution prevention and to inform citizens of their impact on local water quality.

Measurable Goals:

1.B.1 The UG met the measurable goal to produce or obtain a PSA to air on the UG's cable access channel as detailed in an Annual Report dated 2014.

1.B.2 The UG met the measurable goal to produce or license a PSA for use on the UG's cable access channel as detailed in an Annual Report dated 2014.

1.B.3 The UG shall continue to air the public service announcement at least four times a year, with consideration given to the most effective timing for the message (i.e., airing a message on lawn care twice each spring and fall). The subject matter of the announcement may change at UG's discretion.

1.B.4 The public service announcement shall be reviewed after each year it is run and modified as appropriate to present new storm water related educational information for the following year.

Responsible Department(s): Public Works, Public Relations

Compliance Schedule: 2016 - 2019

Recurrence: (1.B.3) Four Times Annually, (1.B.4) Annually

Report(s): Number of televised programs/announcements run each year.

Evaluation Methodology: Review of viewership numbers for broadcast programming. A survey will be developed via online or mailed questionnaires or surveys to assess the knowledge of local residents on storm water issues and to note any change in residential behavior.

1.C BMP: Enhance the UG’s existing website to improve communication and educational materials provided to the public on the SMP, surface water quality issues and how to reduce pollutants to the storm sewer system.

Objective: To improve communication with and provide information and downloadable documents to the public and to UG employees on stormwater management and pollution prevention.

Measurable Goals:

1.C.1 During 2016 the UG shall continue to update their existing "Stormwater Runoff Management" website to include a copy of the approved SMP.

1.C.2 Each year after submitting the UG's Annual Compliance Report to KDHE, a copy will be made available on the UG's website within 30 days.

1.C.3 The UG met the measurable goal to place the PSA on the UG’s “Stormwater Management Website” as detailed in an Annual Report dated 2015.

Responsible Department(s): Public Works, Public Relations, Technology

Compliance Schedule: –2016 - 2019

Recurrence: Continuous

Report(s): Describe and identify the number of items that were added and available for download from the website during each permit year.

Evaluation Methodology: Review number of website hits and downloads of materials to evaluate utility of this media for distribution of materials and education of the public.

1.D BMP: Continue to financially contribute to local agencies and organizations within Wyandotte County who promote improvements in stormwater management and provide educational opportunities to county residents.

Objective: To continue the UG’s existing policy of making financial contributions to entities who work towards educating the public on the practice of reducing pollutants that will be delivered to the MS4 system.

Measurable Goals:

1.D.1 The UG shall continue to be a major financial contributor to the Wyandotte County Conservation District (WCCD) on an annual basis over the 4-year permit cycle. This organization offers a number of services focused on conservation through financial assistance for conservation projects and education programs to area schools and organizations. The annual contribution will range from \$40,000 to \$50,000, but is contingent upon approval of the UG’s annual budget.

Responsible Department(s): Public Works

Compliance Schedule: –2016 - 2019

Recurrence: Annual

Report(s): Documentation of annual contributions. List of projects and activities undertaken by the WCCD each permit year.

Evaluation Methodology: Review effectiveness of projects and activities undertaken by the WCCD to reduce the discharge of pollutants to local storm sewers which reach area streams.

1.E BMP: Continue to financially contribute to regional agencies to promote improvements in stormwater management and provide educational opportunities.

Objective: To continue the UG’s existing policy of making financial contributions to entities that work locally towards a better environment, subject to approval in UG’s annual budget and a determination by UG that suitable candidates exist for this funding.

Measurable Goals:

1.E.1 The UG shall continue to renew its membership annually in the Stormwater Quality Education Committee of the Mid-America Regional Council (MARC), subject to approval of UG’s annual budget. Membership dues are based on the UG’s annual population. Previous annual contributions have been approximately \$12,000.

Responsible Department(s): Public Works

Compliance Schedule: –2016 - 2019

Recurrence: Annual

Report(s): Documentation of annual membership. List of water quality and storm water related projects and activities undertaken by MARC each permit year.

Evaluation Methodology: Review effectiveness of projects and activities undertaken by MARC to reduce the discharge of pollutants to local storm sewers which reach area streams.

1.F BMP: Use of local newsletters for education of stormwater related issues.

Objective: To use UG’s existing newsletters and other media outlets to educate the general public about stormwater related issues.

Measurable Goals:

1.F.1 The UG shall annually submit one article for publication with the Livable Neighborhoods Inc. “Neighborhood” Newsletter. The approximate circulation of this newsletter is 5,000 and includes various neighborhood groups within the community. Articles will contain announcements on community public education and outreach activities, public participation opportunities, and information on best management practices and behavioral changes which can have a positive impact on water quality.

1.F.2 The UG shall annually submit at least three articles for publication with the UG's Weekly E-News. The approximate circulation of this newsletter is 3,300 and includes various neighborhood groups within the community. Articles will contain similar announcements and information listed in 1.F.1 above.

Responsible Department(s): Public Relations

Compliance Schedule: –2016 - 2019

Recurrence: Annual

Report(s): The UG shall provide a summary of all articles written, the subject of the each article, and a sampling of the submittals.

Evaluation Methodology: Determine the extent of storm water related knowledge and changes in public behavior via on-line or mailed questionnaires or surveys.

1.G BMP: Annually review the media utilized through public outreach activities.

Objective: To have an annual review of the media through which the public outreach activities take place to identify emerging new media outlets (e.g. Facebook, Twitter, etc.).

Measurable Goals:

1.G.1 The UG shall annually review each of the outlets utilized in public outreach efforts to determine if other outlets or methods should be used.

Responsible Department(s): Public Relations

Compliance Schedule: –2016 - 2019

Recurrence: Annual

Report(s): List of the media outlets used as part of the Public Information program.

Evaluation Methodology: Determine whether materials and media are effective through on-line or mailed questionnaires or surveys.

1.H BMP: Create and maintain a Stormwater Speaker Bureau

Objective: To establish a speaker bureau in the UG where the public and private organizations would be able to engage the UG for educational opportunities at mutually agreeable dates and times.

Measurable Goals:

1.H.1 Beginning in 2018 the UG will begin operation of the Stormwater Speaker Bureau with the intent of speaking at 8 events per year. These speaking events may be upon request or solicited as part of other UG MS4 programs.

1.H.2 Once the Bureau is established, the UG speakers will solicit through its website and event surveys, topics that those attending would like to see offered.

Responsible Department(s): Public Works, Engineering

Compliance Schedule: –2018 - 2019

Recurrence: Annually

Report(s): Summary of the speaking engagements held.

Evaluation Methodology: Evaluate through surveys at events. Evaluate by level of interest once program is established. Surveys including suggested topics. Number of people attending the events.

1.1 BMP: Conduct Outreach to Natural Stream Owners.

Objective: To conduct outreach to select owners of land in which there are natural streams that receive discharges from the MS4, with the intent of creating greater awareness of the importance of natural streams and their protection.

Measurable Goals:

1.1.1 In 2018, the UG will identify the extent of natural streams within the MS4 area, the context, types of land ownership and land use in which the streams flow. Target audiences that are considered most likely to be interested in watershed management and natural stream protection will be identified. A technical memorandum will be produced to summarize this assessment.

1.1.2 In 2019, the UG will conduct at least one outreach activity to select land owners to provide information about activities that land owners can take to enhance and protect natural streams. The Parks and Recreation department will be enlisted as both an audience, for natural streams in the UG, and as a subject matter expert for landscape and tree management.

Responsible Department(s): Public Works, Engineering, Parks and Recreation

Compliance Schedule: – 2018 - 2019

Recurrence: One Time

Report(s): Summary of the technical memorandum. Any maps produced showing natural streams and their extents in MS4.

Evaluation Methodology: Review maps and data obtained in effort and assess the usefulness of the information. Review level of interest through surveying, questioning property owners approached through above activities.

2. Public Involvement and Participation

As operator of a Phase 1 MS4, the UG shall identify, schedule, implement, evaluate and modify, as necessary, best management practices that comply with the following overall Public Involvement and Participation objectives:

- a. Increase citizen knowledge and awareness of steps that can be taken to reduce pollutants into the storm sewer system.
- b. Participate, through promotion, sponsorship, or other public involvement, in local activities intended to increase public participation to reduce pollutants into the storm sewer system.
- c. To develop a Public Involvement and Participation program which provides for opportunities for the public to become involved in local stormwater issues.

Best Management Practices (BMPs):

2.A BMP: Create a Stormwater Quality Education Grant Program.

Objective: Promote education and public involvement in stormwater quality issues through the development of a stormwater quality education grant program.

Measurable Goals:

2.A.1 The UG met the measurable goal to prepare a set of criteria for the development of a stormwater quality education grant program as detailed in an Annual Report dated 2014.

2.A.2 The UG shall annually promote the grant program to local teachers, schools, districts and local non-profits through its website, e-mail newsletter and direct contacts.

2.A.3 A copy of the grant criteria and applications for the selected projects will be provided in the Annual Compliance Report to KDHE. The report will summarize each project's goals, how the projects were selected, whether the goals were achieved, and what impact each project may have had on water quality improvements.

Responsible Department(s): Public Relations, Public Works and Procurement and Contract Compliance.

Compliance Schedule: –2016 - 2019

Recurrence: Annual

Report(s): A copy of the grant process and applications for the selected projects will be provided in the Annual Compliance Report to KDHE.

Evaluation Methodology: Review the number grant applications and the amount of funding which is provided by the UG on an annual basis. Review whether funding for selected projects is providing environment and social benefits to the community and if the funding is well spent.

2.B BMP: Promote and Implement Community Cleanup Programming.

Objective: To promote and assist in the implementation of community cleanup programming on an annual basis.

Measurable Goals:

2.B.1 The UG shall continue to partner with Operation Brightside Inc. and potentially other neighborhood and civic organizations to facilitate cleanups on an annual basis. The UG shall assist these neighborhood organizations through the proper disposal of debris and trash.

Responsible Department(s): Public Relations

Compliance Schedule: –2016 - 2019

Recurrence: Annual

Report(s): The UG shall report an estimate of the number groups involved in each cleanup as well as the type and estimated quantity of trash collected during each event.

Evaluation Methodology: Review the number of annual events and the number of groups involved. Review the types and quantities of trash collected.

2.C BMP: Provide assistance and materials to community groups which volunteer to stencil storm drain inlets with “Drains to Stream”.

Objective: Provide civic groups with an opportunity to participate in the marking of storm drainage inlets with “Drains to Stream” and to distribute MARC “Storm Drain Stewardship” brochures.

Measurable Goals:

2.C.1 The UG shall continue to advertise the availability of a free MARC “Storm Drain Stewardship” brochure through the UG’s website and newsletter.

2.C.2 The UG shall continue to provide the materials to community groups to voluntarily stencil up to 500 stormwater inlets and to distribute 2,000 “Storm Drain Stewardship” brochures on an annual basis. The UG shall work with the community groups to select the area to be canvassed.

2.C.3 The UG will continue its practice of having all new storm drainage inlet castings be manufactured with the phrase “*Exits to River, Do Not Dump Waste*”. A copy of the Curb Inlet Detail Sheet is included in the Appendix.

2.C.4 The UG shall document the number of groups, the name of the group, the approximate number of inlets that were stenciled and the approximate number of brochures that were distributed on an annual basis.

Responsible Department(s): Public Works

Compliance Schedule: –2016 - 2019

Recurrence: Annual

Report(s): The UG shall report on the number and name of each group and the approximate number of inlets stenciled and brochures distributed in the Annual Compliance Report to KDHE.

Evaluation Methodology: Review progress towards completing the stenciling of inlets within the service area.

3. Illicit Discharge Detection and Elimination

As operator of a Phase 1 MS4, the UG shall identify, schedule, implement, evaluate and modify, as necessary, best management practices that comply with the following overall Illicit Discharge Detection and Elimination (hereinafter "IDDE") Program objectives:

- a. Develop, implement and enforce a program to detect and require the elimination of illicit discharges.
- b. Effectively prohibit, to the extent allowable through ordinance or other regulatory methods, illicit non-stormwater discharges into the storm sewer system and implement appropriate enforcement measures.
- c. Develop and implement standard procedures to inspect, detect and require the elimination of non-stormwater discharges, including illegal dumping to the storm system.
- d. Enhance and maintain an updated storm sewer system map, showing locations of major outfalls in the service area, and associated surface waters, including the name and locations of water bodies receiving discharges from these outfalls.

Best Management Practices (BMPs):

3.A BMP: Evaluate, and update as necessary, the UG ordinances that pertain to illicit discharges.

Objective: To provide legal authority to conduct inspections and enforcement activities for the reduction of illicit discharges by reviewing and updating the UG's existing ordinances.

Measurable Goals:

3.A.1 The UG met the measurable goal to review its existing ordinances that apply to illicit discharges as detailed in an Annual Report dated 2013.

3.A.2 The UG met the measurable goal to include a copy of Chapter 30 of the UG's Municipal Code of Ordinances in the appendix as detailed in an Annual Report dated 2013..

Responsible Department(s): Legal, Public Works

Compliance Schedule: N/A

Recurrence: N/A All measurable goals completed.

Report(s): All measurable goals completed.

Evaluation Methodology: N/A

3.B BMP: Implement and Revise, Where Appropriate, Standard Operating Procedures (hereinafter "SOP") for illicit discharge detection, sampling, tracking and enforcement requirements.

Objective: To implement a set of SOPs for outfall inspection, water sampling, detection and tracking of illicit discharge eliminations, and for requiring the elimination of illicit discharges and cross-connections and enforcing UG's illicit discharge ordinances consistent with the terms of this SMP, which will result in reducing the discharges of pollutants, to the maximum extent practicable.

Measurable Goals:

3.B.1 . The UG met the measurable goal to implement the applicable existing SOPs as detailed in an Annual Report dated 2013.

3.B.2 The UG met the measurable goal to review applicable SOPs as detailed in an Annual Report dated 2014.

3.B.3 A copy of any updated standard procedures referenced below will be included in the Annual Compliance Report submitted to KDHE for the year in which they are updated.

3.B.4 In 2018, the UG shall perform a review of its outfall inspection, dry weather sampling, inspection and tracking, and enforcement SOPs, referenced below. The UG will prepare a memorandum detailing the results of the review. If UG deems it necessary, UG will make modifications to the SOP following the evaluation process.

Responsible Department(s): Public Works, Water Pollution Control, Legal

Compliance Schedule: 2016 - 2019

Recurrence: One Time (SOPs), Continuous (Implementation)

Report(s): Copy of SOP.

Applicable Existing SOPs: SWMP-11 (Illicit Discharge Detection and Elimination –Outfall Inspection); SWMP-12 (Illicit Discharge Detection and Elimination – Dry Weather Sampling); SWMP-13 (Illicit Discharge Detection and Elimination – Investigation and Tracking); SWMP-14 (Illicit Discharge Detection and Elimination – Illicit Discharge Enforcement)

Evaluation Methodology: As the program moves forward, annually review and refine, if UG deems it necessary, the procedures and techniques employed in the discovery and elimination of illicit discharges and in the enforcement of UG illicit discharge ordinances.

3.C BMP: Design, implement and maintain suitable and inclusive IDDE-related tracking and reporting system.

Objective: To map, document and report stormwater outfalls, inspections, sampling, tracking and enforcement actions by refining, utilizing and maintaining an appropriate IDDE-related tracking and reporting system which can assist in reducing discharges of pollutants to local storm sewers which reach area streams.

Measurable Goals:

3.C.1 The UG met the measurable goal to review the quarter section maps within the service area for major outfalls in industrial and residential zones and prepared a list of node numbers as detailed in an Annual Report dated 2013.

3.C.2 The UG shall continue tracking dry weather stormwater outfall inspections and dry weather sampling based on the Center for Watershed Protection’s “Outfall Reconnaissance Inventory Field Sheet” or other published checklists. The system shall be reviewed and adjusted to meet local needs and field conditions.

3.C.3 The UG shall continue illicit discharge detection, tracking, and enforcement activities. The system will be reviewed and adjusted to meet local needs and field conditions.

3.C.4 The UG met the measurable goal to amend existing stormwater maps to distinguish major outfalls as detailed in an Annual Report dated 2014.

Responsible Department(s): Public Works, Water Pollution Control, Technology

Compliance Schedule: 2016 - 2019

Recurrence: Continuous (Implementation)

Report(s): Copies of related forms and a summary of the tracking system results.

Evaluation Methodology: Evaluate tracking and reporting system to determine if it captures pertinent and valuable information and provide sufficient reporting results.

3.D BMP: Provide training of illicit discharge detection and elimination program inspection staff.

Objective: Provide training to UG employees whose duties and responsibilities will place them frequently in the field. The training will cover how to recognize an illicit discharge and the correct reporting and follow-up procedures.

Measurable Goals:

3.D.1 The UG shall hold a training session on how to identify and report suspected illicit discharges in the field for key UG employees with the applicable job responsibilities and classifications. In addition to Erosion & Sediment Control and post-construction BMP inspection staff, these classifications would include Building Inspectors, Street Superintendents, and Sewer Maintenance staff. These training sessions will be conducted in 2017, 2019 and shall be repeated periodically for the benefit of new staff who are placed in these specific positions.

3.D.2 The UG shall provide either in-house or arrange commercial training for personnel assigned to conduct the dry weather outfall inspection, sampling and illicit discharge tracking. These training sessions will be conducted annually.

3.D.3 A copy of the training materials and a dated sign-in sheet containing the names of the attendees will be included in the UG's Annual Compliance Report to KDHE for the year in which the training occurs.

Responsible Department(s): Public Works, Water Pollution Control, Building Inspection

Compliance Schedule: –2016 - 2019

Recurrence: (3.D.2 and 3.D.3) Annually, (3.D.1) 2017 and 2019

Report(s): Copy of training materials and a list of the required and actual attendees per session.

Evaluation Methodology: Analysis of data collected and feedback from field personnel to determine if improvements are necessary in the SOPs and training topics.

3.E BMP: Perform dry weather screening of stormwater outfalls.

Objective: To conduct a system screening program for illicit discharge detection and perform dry weather inspection of stormwater outfalls, as a means to reduce the discharge of pollutants to the maximum extent practicable.

Measurable Goals:

3.E.1 The UG shall conduct at least 250 non-exclusive dry weather inspections per year of stormwater outfall pipes 36-inches in diameter or larger in residential zones and 12-inches in diameter or larger in commercial and industrial zones. The 12-inch and larger storm sewers are currently shown on UG's mapping system. The initial strategy will be to review land use mapping and concentrate on those industrial areas with the greatest potential for illicit discharges. Outfall pipes 36- inches in diameter or larger are typically found in large residential areas and will allow the UG to investigate potential illicit discharges from these locations. It will also allow the UG to identify the magnitude of illicit discharges in residential areas to assist the UG in producing better results and targeting their resources more effectively.

Beginning in 2018 the UG shall reduce the number of Major outfalls inspected per year to 125. The number of major outfalls was estimated when the SMP was written in 2012. Since that time the UG WPC has improved the GIS database and information gathering and Dry weather outfall inspections conducted in 2014 and 2015 have increased the accuracy of the data and confirmed field conditions. As a result, the actual number of major outfalls is closer to 600. Previous dry weather inspections have not confirmed any suspected illicit discharges.

3.E.2 In 2017, the UG shall re-evaluate the overall focus and effectiveness of the dry weather outfall inspection program. The evaluation will be conducted every permit cycle, will involve setting inspection priorities based on the previous permit cycle results, and be submitted for review by the permitting authority.

3.E.3 The UG shall provide a list of the inspected outfalls, the number of illicit discharges that were detected, the types of illicit discharges discovered and how discovered, any discharges that were eliminated, and resulting enforcement actions in its Annual Compliance Report to KDHE.

Responsible Department(s): Public Works, Water Pollution Control

Compliance Schedule: 2016 - 2019

Recurrence: One Time (3.E.1), (3.E.2), Continuous (3.E.3)

Report(s): Summary of activities undertaken to detect illicit discharges, the number of illicit discharges that were detected, and the number eliminated.

Evaluation Methodology: Review of SOP techniques (3.B) and protocols and their success in detecting illicit discharges throughout the UG service area.

3.F BMP: Implement a program to televise and inspect illicit discharges and cross connections between the storm sewer and the sanitary sewer systems.

Objective: To develop a program that uses Close Circuit Television (hereinafter “CCTV”) to assist in the inspection for illicit discharges or to discover any cross-connections between the storm and separate sanitary sewers outside of the CSO area.

Measurable Goals:

3.F.1 During the time when storm sewer lines are being televised for routine maintenance purposes or for capital project needs, the CCTV information will be reviewed for illicit discharges or cross-connection. The UG typically televises approximately 15 miles of storm sewer pipe per year, which is approximately 6% of the 250+ miles of storm sewers currently installed in the UG service area. Any illicit discharges or cross-connections discovered in the storm sewer system will be documented, tracked and disconnected, using the UG's IDDE SOPs and be consistent with any related recommendations contained in the Integrated Overflow Control Plan (hereinafter “IOCP”) as guidance.

3.F.2 The UG shall continue to televise 20,000 linear feet of sanitary sewer pipe per year in the MS4 service area. Any illicit discharges or cross-connections discovered in the sanitary sewer system will be documented, tracked and disconnected, using the UG's IDDE SOPs and be consistent with any related activities and recommendations contained in the IOCP as guidance. This measure will be coordinated with the UG's IOCP development, the results of which will be provided as part of the reporting requirements under this BMP.

3.F.3 The UG shall continue reviewing previously collected storm and sanitary sewer CCTV inspection videos for those areas within the MS4 service area (excluding the combined sewer system (CSS) area) at a rate of approximately 20,000 linear feet a year. The video shall be reviewed to determine if there are: 1) illicit discharges in either the storm or sanitary sewers or 2) cross-connections. Any illicit discharges or cross-connections discovered in the separate sanitary sewer system will be documented, tracked and disconnected using the UG's IDDE SOPs and be consistent with any related activities and recommendations contained in the IOCP as guidance.

3.F.4 The UG shall provide a summary report including the number of linear feet of storm and sanitary sewer lines that were televised and the number of illicit discharges or cross-connections that were detected and eliminated in its Annual Compliance Report to KDHE.

Responsible Department(s): Public Works, Water Pollution Control

Compliance Schedule: –2016 - 2019

Recurrence: Continuous

Report(s): Total footage of storm and sanitary sewer lines televised. A list of illicit discharges detected, cross connections discovered, and all that were eliminated will be provided.

Evaluation Methodology: Improvements in efficiency in reviewing CCTV data.

3.G BMP: Maintain a current UG storm sewer mapping system.

Objective: To continually update and maintain a current storm sewer mapping system and the inventory of stormwater outfalls.

Measurable Goals:

3.G.1 The UG met the measurable goal to convert its existing AutoCAD MS4 maps to GIS as detailed in an Annual Report dated 2015.

3.G.2 Beginning in 2016 the UG shall annually update the GIS maps with Record Drawings detailing modifications to the MS4 system.

Responsible Department(s): Water Pollution Control

Compliance Schedule: –2017 - 2019

Recurrence: Continuous

Report(s): Printout of GIS stormwater map.

Evaluation Methodology: N/A

3.H BMP: Continue participation of the UG’s existing Household Hazardous Waste Collection Program.

Objective: To assist UG residents in the proper disposal of household hazardous waste materials through advertisement and participation in the UG’s existing Household Hazardous Waste Collection Program (HHW).

Measurable Goals:

3.H.1 The UG shall continue to coordinate seven HHW collection days every calendar year. The UG shall collect the following items at 2443 South 88th Street, or an equivalent location: motor oil, batteries, antifreeze, degreasers, paints, varnishes, solvents, lawn and garden insecticides/pesticides, and household cleaning products.

3.H.2 The UG shall estimate the amount of material that is collected during each event and provide a list in their Annual Compliance Report to KDHE.

3.H.3 The UG shall continue its existing program of collection and disposal of abandoned tires.

Responsible Department(s): Public Works, Technology

Compliance Schedule: –2016 - 2019

Recurrence: 7 days annually

Report(s): Summary of HHW material collected annually (3.H.2).

Evaluation Methodology: Review the amount of HHW collected each year.

3.1 BMP: Engage commercial facilities that have potential to contribute pollutants to the MS4.

Objective: To engage and educate select commercial facilities within the MS4 area about their potential to pollute. The UG will engage these facilities with the intent of educating them about what these facilities can do to prevent pollutants from entering the MS4.

Measurable Goals:

3.1.1 In 2018, the UG will use available resources to assess the types of commercial facilities that may contribute pollutants to the MS4. The UG will assess the level of effort and potential rewards involved in outreach to commercial facilities. The UG will prepare a technical memorandum detailing the efforts necessary, results and recommendations.

3.1.2 In each of the years 2018 and 2019, based on the technical memorandum, the UG will select a group of commercial facilities to engage. Activities may include, but are not limited to, mailing flyers and educational events.

Responsible Department(s): Public Works, Engineering

Compliance Schedule: – 2018 - 2019

Recurrence: Annually, beginning in 2018

Report(s): Summary of the technical memorandum. Copy of sign in sheets (if applicable). Copy of educational materials used to educate commercial facility owners, operators, and/or employees.

Evaluation Methodology: Evaluate through surveys at events used to educate commercial facilities. Review any maps produced and the potential pollution commercial facilities in the MS4

4. Construction Site Stormwater Runoff Control

As operator of a Phase 1 MS4, the UG shall develop, implement, and enforce procedures to reduce pollutants in any stormwater runoff to the UG's storm sewers from construction activities that result in a land disturbance of greater than or equal to one (1) acre, and a land disturbance of less than one acre of total land area that is part of a larger common plan of development or sale. These best management practices concern the following overall objectives:

- a. Develop an ordinance, or other legal means, to require erosion and sediment controls, as well as sanctions to ensure compliance with UG and KDHE regulations.
- b. Requirements for construction site owners and operators to implement erosion and sediment control best managements practices.
- c. Requirements for construction site owners and operators to secure authorization to discharge stormwater from construction activities under a UG permit for construction activities that result in a land disturbance of greater than or equal to one (1) acre.
- d. Requirements for construction site owners and operators to secure authorization to discharge stormwater from construction activities under a UG permit for construction activities that result in a land disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one acre.
- e. Procedures for site inspection and enforcement of control measures.

Best Management Practices (BMPs):

4.A BMP: Implement and revise, where appropriate, SOPs for stormwater plan review/approval, construction site inspections and subsequent enforcement activities.

Objective: To implement a set of SOPs for detailed plan reviews and approvals, site inspections, and any necessary enforcement actions, consistent with the terms of this SMP, which will assist in reducing the discharge of pollutants.

Measurable Goals:

4.A.1 The UG began implementing the below SOPs in 2013.

4.A.2 The UG met the measurable goal to review and update the Applicable SOPs as detailed in an Annual Report dated 2014.

4.A.3 A copy of any updated standard procedures referenced below will be included in the Annual Compliance Report submitted to KDHE for the year in which they are updated.

4.A.4 In 2019, the UG shall review the SOPs for stormwater plan review, site inspections, and enforcement. The UG shall prepare a technical memorandum detailing the results of the review. If UG deems it necessary, UG will make modifications to the SOP following the evaluation process.

Responsible Department(s): Public Works, Urban Planning and Land Use

Compliance Schedule: 2016 - 2019

Recurrence: One Time (SOPs), Continuous (Implementation)

Applicable Existing SOPs: SWMP-01 (Construction Site Stormwater Runoff Plan Review); SWMP-04 (Construction Site Stormwater Runoff Erosion and Sediment Control Inspection); SWMP-05 (Construction Site Stormwater Runoff Control Erosion Control Enforcement Actions)

Report(s): Copies of the procedures.

Evaluation Methodology: As the program moves forward, annually review and refine the developed SOPs to evaluate its capability to ensure consistency in UG's plan review and approval, construction site inspection services, and enforcement activities.

4.B BMP: Continue use of a tracking system for stormwater plan review/approval, construction site inspections and subsequent enforcement activities.

Objective: To continue the use of a system to track the stormwater plan review and approval process, construction site inspections and any related enforcement actions.

Measurable Goals:

4.B.1 The UG shall continue its existing tracking system to track plan review and approvals, site inspections and enforcement actions.

4.B.2 A report on stormwater plan review/approval, site inspection, and enforcement activities shall be provided in the Annual Compliance Report submitted to KDHE.

Responsible Department(s): Public Works, Urban Planning and Land Use, Technology

Compliance Schedule: –2016 - 2019

Recurrence: Continuous (Implementation)

Report(s): Documentation of the tracking system activities.

Evaluation Methodology: Evaluate existing tracking system to determine if it captures pertinent and valuable information, allows query ability and provides clear reporting results.

4.C BMP: Provide training to the UG's Erosion and Sediment Control (hereinafter "E&S") Inspection staff.

Objective: To provide training to UG inspection personnel on the requirements of the UG's Erosion and Sediment Control program (E&S).

Measurable Goals:

4.C.1 The UG shall continue to provide training regarding the UG's erosion and sediment control standards to key employees. In addition to Erosion & Sediment Control and post-construction BMP inspection staff, this would include the following classifications: Building Inspection, Street Superintendents and Sewer Maintenance. The purpose of the training is to allow employees that are frequently in the field the ability to recognize and report on erosion control problems. Training sessions shall be held every two years and shall be repeated periodically for the benefit of new staff who are placed in these specific positions.

4.C.2 A copy of the Table of Contents for the training materials and the sign-in sheets containing the names of the attendees for the training sessions described in BMP 4.C.1, will be included in the UG's Annual Compliance Report to KDHE. The detailed training materials will be provided upon request.

Responsible Department(s): Public Works

Compliance Schedule: 2016 - 2019

Recurrence: (4.C.1) 2017, 2019, (4.C.2) As Appropriate

Report(s): Total number of UG staff required to have training and the actual numbers of staff trained. Copy of the Table of Contents for the training materials and a sign-in sheet containing the names of the attendees for the training sessions will be provided.

Evaluation Methodology: Review procedures and outcomes to ensure the E&S inspection staff are adequately and consistently evaluating and inspecting project sites that meet the regulations.

4.D BMP: Continue training program for local contractors and owners.

Objective: To continue a training program for local construction site owners, contractors, and site operators.

Measurable Goals:

4.D.1 The UG shall sponsor a training session for local construction site owners, contractors, site operators, and installers regarding the proper use of best management measures for construction sites covered by UG's E&S as well as the rules and requirements of the program. These training sessions will be held every two years.

4.D.2 A copy of the training materials and a sign-in sheet containing the names of the attendees for the training sessions described in BMP 4.D.1 will be included in the UG's Annual Compliance Report to KDHE. The detailed training materials will be available upon request.

Responsible Department(s): Public Works

Compliance Schedule: 2016 - 2019

Recurrence: (4.D.1) 2016, 2018, 2019 (4.D.2) As Appropriate

Report(s): Copy of the training materials and a sign-in sheet containing the names of the attendees for the training sessions.

Evaluation Methodology: Review evaluations and comments regarding the quality of training. Assess whether changes to training should be made for the benefit of future attendees.

4.E BMP: Conduct routine construction site inspections.

Objective: To inspect each construction site during construction, or as is necessary based on complaints, to ensure compliance with the UG's Erosion and Sediment Control regulations.

Measurable Goals:

4.E.1 Conduct erosion control inspections based on development activity, number of active construction sites, location and other factors, such as construction season and topography. Emphasis will be for those projects that are actively grading or are in the immediate post-grading stage, sites upstream from Wyandotte County Lake as well as other area ponds and lakes, and sites with the largest disturbed areas.

4.E.2 Whenever practicable, the UG shall conduct an erosion control inspection within 5 working days of receiving a complaint.

4.E.3 The UG shall include a summary of the inspection records in its Annual Compliance Report to KDHE. The records will include information on the number of active sites, the inspection frequencies, the number of complaints received, and a list of any non-compliant sites. Enforcement activities are reported under BMP 4.B.2.

Responsible Department(s): Public Works

Compliance Schedule: –2016 – 2019

Recurrence: Continuous

Report(s): Summary of inspection records.

Evaluation Methodology: Evaluate compliance of construction site owners and response to complaints.

5. Post-Construction Stormwater Management Program

As operator of a Phase 1 MS4, the UG shall develop, implement, and enforce procedures and best management practices to address post-construction runoff. These best management practices concern the following overall objectives:

- a. Develop and implement strategies of structural and non-structural BMPs appropriate to the local community, and where appropriate, encourages the use of these BMPs and designs with the goal of maintaining or replicating pre-development runoff characteristics and site hydrology.
- b. Requirement for adequate long-term operation and maintenance of structural stormwater management facilities, including inspection, tracking and enforcement methods.
- c. The ordinance to require long-term operation and maintenance of post-construction controls.

Best Management Practices (BMPs):

5.A BMP: Maintain a set of local standards for post-construction stormwater management and make the standards available to developers, local contractors and the public.

Objective: To maintain and make available a set of local standards for post-construction stormwater BMPs for local contractors and the general public.

Measurable Goals:

5.A.1 The UG will maintain and enforce current local standards and will post on their website a copy of, or a link to, the adopted standards and best management practices outlined in the standards.

Responsible Department(s): Public Works

Compliance Schedule: 2016- 2019

Recurrence: Continuous

Report(s): Copy of the most recent version of the standards shall be included with the SMP.

Evaluation Methodology: Review standards and BMP information annually and update as necessary as a result of compliance or non-compliance by developers, contractors, and the public.

5.B BMP: Implement and revise, where appropriate, SOPs for stormwater plan review/approval, post-construction site inspections and subsequent enforcement activities.

Objective: To implement a set of SOPs for detailed plan reviews and approvals, site inspections, and any necessary enforcement actions, consistent with the terms of this SMP, which will assist in reducing the discharge of pollutants.

Measurable Goals:

The UG shall continue to implement the Applicable Existing SOPs referenced below.

5.B.1 The UG met the measurable goal to update the Applicable SOPs as detailed in an Annual Report dated 2014.

5.B.2 The UG met the measurable goal to review and update, if appropriate, the Applicable SOPs as detailed in an Annual Report dated 2014.

5.B.3 A copy of any updated standard procedures referenced below will be included in the Annual Compliance Report submitted to KDHE for the year in which they are updated.

5.B.4 In 2019, the UG shall review the SOPs for plan reviews and inspections, and enforcement. The UG shall prepare a technical memorandum detailing the results of the review. If UG deems it necessary, UG will make modifications to the SOP following the evaluation process.

Responsible Department(s): Public Works, Urban Planning and Land Use

Compliance Schedule: 2016 - 2019

Recurrence: One Time (SOPs), Continuous (Implementation)

Applicable Existing SOPs: SWMP-02 (Post-Construction Stormwater Management Program Plan Review); SWMP-06 (Post-Construction Site Stormwater Management Program BMP Inspection); SWMP-07 (Post-Construction Site Stormwater Management Program Enforcement Procedure)

Report(s): Copies of procedures and checklists.

Evaluation Methodology: As the program moves forward, annually review and refine the procedures to evaluate its capability to ensure consistency in UG's plan review and approval, site inspection services and enforcement activities.

5.C BMP: Maintain a tracking system for post-construction sites and continue BMP inspections.

Objective: To maintain an inventory of post-construction stormwater BMPs (both privately and publicly owned) within the MS4 area and to maintain a system to track the BMP inspections to reduce the discharge of pollutants to local storm sewers which reach area streams to the maximum extent practicable.

Measurable Goals:

5.C.1 The UG shall maintain an inventory of existing publicly and privately owned BMPs. The BMP inventory list will be maintained and updated annually.

5.C.2 The UG met the measurable goal to update its system to track inspection and compliance of publicly and privately owned BMPs, as detailed in an Annual Report dated 2013.

5.C.3 The UG shall conduct annual inspections of publicly owned post-construction BMPs as required by the ordinance. The frequency of the inspection shall be established and identified in the standard operating procedures (SOP). Follow-up inspections of these BMPs will be performed in accordance with the SOP.

5.C.4 The UG shall enforce annual operation & maintenance requirements for privately owned BMPs within the MS4 service area, as required by the UG's Code of Ordinances, Article XV of Chapter 8. The enforcement activities will be established and identified in the standard operating procedures developed under BMP 5.B.

5.C.5 The UG shall continue to implement a system to store information regarding these BMPs and track the inspection, follow-up activities, and any enforcement action of post-construction BMPs.

5.C.6 The UG shall provide a copy of the post-construction BMP inventory, a summary of the most recent inspection reports, and a list of any enforcement action in its Annual Compliance Report submitted to KDHE.

Responsible Department(s): Public Works

Compliance Schedule: 2016 -2019

Recurrence: Continuous

Report(s): Summary report of inventory, inspections and enforcement actions.

Evaluation Methodology: Evaluate existing tracking system to determine if it captures pertinent and valuable information, allows for query ability and provides complete reporting results.

5.D BMP: Provide training to UG Inspection staff.

Objective: Provide training to UG inspection personnel on the requirements of the UG's Post-Construction SMP and to instruct the assigned inspection staff on the proper mechanics and functionality of structural BMPs as well as safety and field awareness issues.

Measurable Goals:

5.D.1 The UG shall continue to train new key employees regarding the new post- construction BMP standards. In addition to Erosion & Sediment Control and post-construction BMP inspection staff, key employees would include the following job classifications: Building Inspection, Street Maintenance, Public Works Development Coordinator and the Public Works Stormwater Coordinator. These training sessions shall be repeated for the benefit of new staff.

5.D.2 A copy of the training materials and a sign-in sheet containing the names of the attendees for the training session described in BMPs 5.D.1 will be included in the UG's Annual Compliance Report to KDHE.

Responsible Department(s): Public Works

Compliance Schedule: –2016 - 2019

Recurrence: (5.D.1 and 5.D.2) As Necessary

Report(s): Copy of the training materials and a sign-in sheet containing the names of the attendees for the training sessions.

Evaluation Methodology: Review procedures and outcomes to ensure the inspection staff are adequately and consistently evaluating and inspecting BMP sites that meet the regulations.

5.E BMP: Continue a training program for local property owners, designers and developers.

Objective: To continue a training program for local BMP project site owners, designers and developers.

Measurable Goals:

5.E.1 The UG shall continue to sponsor a training session for architects / engineers / developers / contractors and owners of stormwater structural BMPs regarding the maintenance, inspection and enforcement program. These training sessions will be held every two years.

5.E.2 A copy of the training materials and a sign-in sheet containing the names of the attendees for the training sessions described in BMP 5.E.1 will be included in the UG's Annual Compliance Report to KDHE, appropriate.

Responsible Department(s): Public Works

Compliance Schedule: –2016, 2018, 2019

Recurrence: (5.E.1, 5.E.2) 2016, 2018, 2019

Report(s): Copy of the training materials and a sign-in sheet containing the names of the attendees for the training sessions.

Evaluation Methodology: Review evaluations and comments regarding the quality of training. Assess whether changes to training should be made for the benefit of future attendees.

6. Pollution Prevention/Good Housekeeping

As operator of a Phase 1 MS4, the UG shall develop, implement, evaluate and modify, as necessary, an operation, maintenance, and training program for municipal operations and municipally owned/operated facilities consistent with the following overall goals:

- a. Operation and maintenance programs, including activities, schedules, SOPs and inspection procedures which include provisions and controls to reduce pollutant discharges to the MS4.
- b. Materials, including fertilizers, herbicides and pesticides shall be applied according to manufacturer's recommendations.
- c. Proper disposal of waste materials.

Best Management Practices (BMPs):

6.A BMP: Implement and revise, where appropriate, the UG's SOP for application of pesticides, herbicides and fertilizers (hereinafter "PHF") on UG property.

Objective: To implement the UG's SOP which describes the application of PHFs used on UG property and its existing PHF tracking system. To require integrated pest management by all contractors performing lawn care maintenance work on UG property.

Measurable Goals:

6.A.1 The UG shall continue to implement the Applicable Existing SOPs referenced below.

6.A.2 The UG met the measurable goal to review and update, if appropriate, its SOP for PHF application as detailed in an Annual Report dated 2014.

6.A.3 The UG met the measurable goal to review and modify specifications and contracts for lawn care maintenance at public buildings and incorporate pest management into contract specifications as detailed in an Annual Report dated 2014.

6.A.4 A copy of any updated version of the SOP referenced below shall be included in the Annual Compliance Report to KDHE for the year in which it was updated. The UG shall provide a copy of the most recent PHF application procedures (SOP) and lawn maintenance contract specifications, a list of the amounts of PHFs applied to UG property, and a list of the certified contractors who applied PHF to UG property in each Annual Compliance Report to KDHE.

Responsible Department(s): Parks & Recreation, Procurement

Compliance Schedule: 2016 - 2019

Recurrence: One Time (6.A.5), Continuous (6.A.1, 6.A.4)

Applicable Existing SOP: SWMP-08 (Pesticide, Herbicide, and Fertilizer Application)

Report(s): Copy of SOP, PHFs applied on UG property, and list of certified applicators/contractors.

Evaluation Methodology: As the program moves forward, annually review and refine the developed SOP to evaluate its capability to ensure consistency in application of PHFs.

6.B BMP: Continue to operate the UG’s existing vehicle washing facility.

Objective: Continue to operate a vehicle washing facility which collects and disposes of wash water in the sanitary sewer system.

Measurable Goals:

6.B.1 The UG shall continue its existing program of washing of UG vehicles at its existing vehicle wash facility, currently located at 50th Street and State Avenue. The current procedures will be reviewed and updated as necessary to reflect industry best practices.

Responsible Department(s): Public Works

Compliance Schedule: –2016 - 2019

Recurrence: Continuous

Applicable Existing SOP: SWMP-03 (Vehicle Washing)

Report(s): A copy of any updated standard operating procedure and an inventory of all vehicle washing facilities.

Evaluation Methodology: Review the effectiveness of collecting and disposing of wash water consistent with the goal of maintaining water quality.

6.C BMP: Review and refine, if UG deems it necessary, the UG’s tracking system for street sweeping. Implement SOP for street sweeping.

Objective: To implement the UG’s existing street sweeping SOP and to review and refine the UG’s tracking program which describes route information, prioritization method, cleaning frequencies and disposal of material collected.

Measurable Goals:

6.C.1 The UG continue following the applicable existing SOP referenced below. In 2019, the UG will review and refine its current system to track street sweeping activities. The UG shall track the route classification and the amount of material collected on a monthly basis.

6.C.2 The UG met the measurable goal to perform a review of its street sweeping SOP and prepared a technical memorandum as detailed in an Annual Report dated 2014.

6.C.3 The UG may continue the use of the transfer station located at its central garage, 50th Street and State Avenue, for street sweeping materials. Storage of street sweepings at the transfer station shall be in appropriately designed containers. The UG currently does not use the site described above as a transfer station for street sweepings. The UG currently uses a transfer station located at 47th Street and Orville Avenue for disposal of street sweepings.

6.C.4 The UG shall include a list of dates, route classifications and material collected on a monthly basis in its Annual Compliance Report to KDHE.

6.C.5 A copy of any updated version of the SOP referenced below shall be included in the Annual Compliance Report to KDHE for the year in which it was updated.

Responsible Department(s): Public Works

Compliance Schedule: – 2016 - 2019

Recurrence: (6.C.3, 6.C.1) Continuous, (6.C.4, 6.C.5) Annually

Applicable Existing SOP: SWMP-09 (Street Sweeping)

Report(s): Total amount of material collected monthly and a copy of latest street sweeping procedures.

Evaluation Methodology: Annually review the efficiency of street sweeping plan and total amount of waste material collected. As the program moves forward, annually review and refine the developed SOP to evaluate its effectiveness.

6.D BMP: Provide training to UG employees on good housekeeping activities related to stormwater management and how to reduce pollutants to the MS4.

Objective: To provide training to UG employees that will educate them on stormwater management, water quality, and how to reduce pollutants to the MS4.

Measurable Goals:

6.D.1 The UG shall continue to prepare and distribute Stormwater Pollution Prevention training materials available to UG employees through e-mails and the UG's Intranet site.

6.D.2 A copy of the training materials will be included in the UG's Annual Compliance Report to KDHE.

Responsible Department(s): Public Works, Human Resources

Compliance Schedule: –2016 - 2019

Recurrence: Annually

Report(s): Copy of training materials.

Evaluation Methodology: Evaluate the effectiveness of the training materials based on employee feedback and observed behavior changes.

6.E BMP: Continue the existing curb inlet inspection and cleaning program.

Objective: To reduce the discharge of pollutants to area streams from the MS4 to the maximum extent practicable by developing a wide-ranging inlet inspection and cleaning program.

Measurable Goals:

6.E.1 The UG shall continue its existing inlet inspection program by performing approximately 5,000 inspections per year.

6.E.2 The UG shall continue its existing inlet cleaning program by cleaning approximately 3,000 inlets per year. The number on inlets cleaned is dependent upon observations and the results of the inspection process conducted under BMP 6.E.1.

6.E.3 The UG met the measurable goal to re-evaluate the overall focus and effectiveness of the existing curb inlet inspection and cleaning program as detailed in an Annual Report dated 2015.

6.E.4 The UG shall provide a summary report of the curb inlets that are inspected and cleaned in its Annual Compliance Report to KDHE.

Responsible Department(s): Public Works, Water Pollution Control

Compliance Schedule: –2016 - 2019

Recurrence: Continuous

Report(s): Total number of curb inlets inspected/cleaned each year.

Evaluation Methodology: Review the cleaning reports and the techniques employed in the inspection and cleaning of inlets as well as the process used to prioritize inspection and cleaning activities.

6.F BMP: Review and update, if needed, the UG’s tracking system for inlet inspections and cleaning. Implement SOP for inlet inspections and cleaning.

Objective: To review and update the UG’s existing inlet inspection and cleaning tracking program which describes route information, prioritization method, cleaning frequencies and disposal of material collected. To implement the SOP for inlet inspections and cleaning.

Measurable Goals:

6.F.1 Beginning on the effective date of the Stormwater Management Plan, the UG shall implement the Applicable Existing SOP referenced below.

6.F.2 The UG met the measurable goal to review and refine its current system to track inlet inspections and cleaning, updated the SOP, and incorporated inspections and cleaning into the current maintenance work order system as detailed in an Annual Report dated 2014.

6.F.3 The UG met the measurable goal to perform a review of its inlet inspection and cleaning procedures and prepared a memorandum detailing the results as detailed in an Annual Report dated 2015.

6.F.4 A copy of any updated version of the SOP referenced below shall be included in the Annual Compliance Report to KDHE for the year in which it was updated.

6.F.5 In 2018, The UG shall perform a review of its inlet inspection and cleaning procedures and prepare a memorandum detailing the results. If UG deems it necessary, UG will make modifications to the SOP following the evaluation process.

Responsible Department(s): Public Works

Compliance Schedule: –2016 - 2019

Recurrence: (6.F.1, 6.F.5) One Time, (6.F.4) Annually

Applicable Existing SOP: SWMP-10 (Stormwater Inlet Inspection and Cleaning)

Report(s): A copy of latest inspection/cleaning procedures.

Evaluation Methodology: As the program moves forward, annually review and refine the SOP and the efficiency of inlet inspection and cleaning plan.

6.G BMP: Create an inventory of UG-owned/operated or UG-operated buildings and facilities. Review permit coverage and SWPPPs for regulated sites.

Objective: To create an inventory of all UG-owned/operated or UG-operated buildings and facilities. Based upon this inventory, to determine which sites should have permit coverage from KDHE and a SWPPP in place, and which sites should not. For the regulated sites, to confirm permit coverage and collect SWPPPs for review and comment.

Measurable Goals:

6.G.1 The UG met the measurable goal to update its inventory of UG owned/operated and/or UG operated buildings and facilities and categorized them according to whether they were within the definition of 40 CFR 122.23 paragraphs (b)(14)(i) through (xi) (hereinafter “industrial sites”) and non-regulated sites as detailed in an Annual Report dated 2015.

6.G.2 The UG met the measurable goal to alert those sites found to be categorized as industrial per 6.G.1 and notified whether they were required to have coverage under the KDHE General Permit for Stormwater Runoff from Industrial Activity as detailed in an Annual Report dated 2014.

6.G.3 The UG met the measurable goal to follow up with the appropriate department to ascertain whether the site is covered by the General Permit and provided assistance in obtaining the proper permit and assisted in developing a Stormwater Pollution Prevention Plan (SWPPP) as detailed in an Annual Report dated 2015.

6.G.4 The UG shall provide a copy of the updated inventory as well as a list of departments notified and any follow-up conducted in its Annual Compliance Report to KDHE.

Responsible Department(s): Public Works

Compliance Schedule: –2016 - 2019

Recurrence: (6.G.4) Annually

Report(s): A copy of the latest inventory, departments notified, and follow-up performed.

Evaluation Methodology: As the program moves forward, annually review whether all regulated sites have permit coverage and have SWPPPs in place.

6.H BMP: Monitor good housekeeping at non-regulated sites.

Objective: Based upon the inventory developed in BMP 6.G, to visit each UG-owned/operated or UG-operated building or facility that is not categorized as an industrial site in order to recommend stormwater-related good housekeeping improvements.

Measurable Goals:

6.H.1 The UG met the measurable goal to develop a schedule to visit each non-regulated facility within the 5-year permit cycle as detailed in an Annual Report dated 2014.

6.H.2 The UG shall continue visiting these non-regulated sites. During these visits, the UG will provide educational materials regarding good housekeeping practices meant to reduce the risk of non-stormwater discharges to the MS4 system, will discuss proper management practices with the manager of the site, and will recommend improvements that could be made on-site with regard to stormwater management. The UG will continue these site visits until all are reached.

6.H.3 The UG shall provide a copy of its schedule and copies of its educational materials in its Annual Compliance Report to KDHE. The UG shall provide a copy of any written recommendations made for a particular site upon request.

Responsible Department(s): Public Works

Compliance Schedule: –2016 - 2019

Recurrence: (6.H.2) Ongoing (Implementation) and (6.H.3) Annually

Report(s): A copy of UG's schedule and educational materials.

Evaluation Methodology: After all sites are visited once, review the educational materials and make needed improvements in information provided.

7. Industrial Activity Stormwater Runoff Management

As operator of a Phase 1 MS4, the UG shall develop, implement, evaluate and modify, as UG deems necessary, a program for addressing discharges from industrial facilities, included in 40 CFR § 122.26(d)(2)(iv)(C), to the MS4 consistent with the following overall objectives:

- a. Develop and implement a program to identify and inspect these facilities and sites to review whether there are effective stormwater control measures in place at the site.
- b. Where appropriate, take enforcement action to address illicit discharges from those identified sites consistent with UG's IDDE program (discussed above).

Best Management Practices (BMPs):

7.A BMP: Develop a Standard Operating Procedure (SOP) for stormwater plan review/approval, industrial site inspections, review of stormwater control measures during those inspections, and subsequent enforcement activities.

Objective: To develop a set of Standard Operating Procedures (SOP) for detailed plan reviews and approvals, site inspections, review of stormwater control measures, and any subsequent enforcement actions deemed necessary by UG.

Measurable Goals:

7.A.1 The UG met the measurable goal to create a Plan Review and Approval SOP for industrial sites as detailed in an Annual Report dated 2013.

7.A.2 The UG met the measurable goal to create an Inspection of Industrial Sites SOP as detailed in an Annual Report dated 2014.

7.A.3 The UG met the measurable goal to create an SOP for carrying out enforcement actions on any industrial site found to be in violation of the UG ordinances as detailed in an Annual Report dated 2013.

7.A.4 The UG met the measurable goal to include a copy of the above described SOPs as detailed in an Annual Report dated 2013.

7.A.5 In 2019, the UG shall review the SOPs for plan review, inspection, and enforcement. The UG shall prepare a technical memorandum detailing the results of the review. If UG deems it necessary, make modifications to the SOP following the evaluation process.

Responsible Department(s): Public Works, Legal

Compliance Schedule: 2019

Recurrence: One time

Report(s): Copies of all SOPs.

Evaluation Methodology: Annually review and refine, if the UG deems it necessary, the developed SOPs to evaluate their capability to ensure consistency in UG's plan review and approval, site inspections, and enforcement activities.

7.B BMP: Maintain an inventory of Industrial facilities.

Objective: To maintain an inventory of Industrial facilities as defined by 40 CFR § 122.26(d)(2)(iv)(C), which is to be maintained and updated on an annual basis.

Measurable Goals:

7.B.1 The UG shall update its industrial facilities list to include industrial facilities consistent with 40 C.F.R. 122.26(d)(2)(iv)(C) that the UG determines are contributing a substantial pollutant loading to the MS4. This list shall include municipal landfills, hazardous waste treatment, disposal and recovery facilities (TSDs), and industries subject to reporting requirements pursuant to SARA Title III Section 313. The list shall be updated on an annual basis.

7.B.2 A copy of the list of industrial facilities, including their classification per 40 CFR § 122.26(d)(2)(iv)(C) shall be included in the UG's Annual Compliance Report to KDHE.

Responsible Department(s): Public Works, Geospatial

Compliance Schedule: –2016 - 2019

Recurrence: Continuous

Report(s): List of all industrial facilities noted above within UG's MS4 service area.

Evaluation Methodology: Completion of list.

7.C BMP: Implement an Industrial facility inspection program.

Objective: To inspect each industrial site to ensure compliance with the UG's ordinances.

Measurable Goals:

7.C.1 The UG shall continue inspecting two (2) of these sites per year. A priority list of facilities based upon industrial classification shall be established as a predictor of potential pollutant loadings. The list may be modified as a result of subsequent inspections. In 2016 the UG shall also conduct sampling at the two (2) facilities selected for inspections in accordance with BMP 7.E.

7.C.2 Prior to commencing with inspections, all inspectors and UG personnel assigned to conduct inspections under this program shall be trained in accordance with the measurable goals identified under the IDDE Program, BMP Number 3.D.

7.C.3 A copy of the annual inspection reports will be retained for three years. A summary of the annual inspection reports will be included in the UG's Annual Compliance Report to KDHE.

Responsible Department(s): Public Works

Compliance Schedule: –2016 - 2019

Recurrence: Continuous

Report(s): Summary of inspection records.

Evaluation Methodology: Evaluate compliance of facility owners.

7.D BMP: Adopt legal authority for inspection of industrial facilities, review of on-site stormwater control measures, and subsequent enforcement.

Objective: To review and revise, if the UG deems it necessary, UG's ordinances to allow for UG inspection of industrial facilities, review of their stormwater control measures, and the institution of enforcement actions in appropriate cases. The UG amended ordinances and is enforcing ordinances found in Sec 30-132 Industrial Facility Discharges to Storm Sewer.

Measurable Goals:

7.D.1 The UG met the measurable goal to review current Code of Ordinances and adopted new ordinances Sec. 301-132 "Industrial Facility Discharges to Storm Sewers" as detailed in an Annual Report dated 2014.

7.D.2 The UG met the measurable goal to include a copy of review results and ordinance activities as detailed in an Annual Report dated 2014.

Responsible Department(s): Public Works

Compliance Schedule: -2016 - 2019

Recurrence: Completed

Report(s): Completed

Evaluation Methodology: Completed

7.E BMP: Develop a program for monitoring industrial discharges to the MS4.

Objective: To develop and maintain a program for monitoring industrial discharges to the MS4 and incorporate the new permit requirements into the existing Industrial Activity Stormwater Runoff Management Program.

Measurable Goals:

7.E.1 Develop and maintain a list of industrial facilities consistent with 40 C.F.R. 122.26(d)(2)(iv)(C) that the permittee determines are contributing a substantial pollutant loading to the municipal storm sewer system. This list shall include municipal landfills; hazardous waste treatment, disposal, or recovery facilities; and facilities that are subject to section 313 of title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA).

7.E.2 Annually two facilities on the list shall be identified as high priority facilities and an inspection shall be conducted with sampling of stormwater run-off, for the following parameters:

1. Oil and grease – mg/l
2. Chemical oxygen demand – mg/l
3. pH – Standard Units
4. Biochemical oxygen demand (5 day) – mg/l
5. Total suspended solids – mg/l
6. Total phosphorus – mg/l
7. Total Kjeldahl nitrogen (TKN) - mg/l reported as N
8. Nitrate plus nitrite (NO₃NO₂) – mg/l reported as N
9. Total Nitrogen – mg/l calculated as TKN + NO₃NO₂
10. Any other pollutant limited in effluent guidelines subcategories, to the extent applicable to the specific facility
11. Any other pollutant listed in an existing NPDES permit for the industrial facility.

A minimum of a single grab sample shall be obtained for a storm event resulting in 0.25 inch or more rainfall.

Responsible Department(s): Public Works, Water Pollution Control

Compliance Schedule: –2016 - 2019

Recurrence: Continuous

Report(s): Updated list of industrial facilities and summary of sampling results.

Evaluation Methodology: Evaluate the results and compare to comparable wet weather monitoring data in the area.

8. TOTAL MAXIMUM DAILY LOAD (TMDL) REGULATED POLLUTANTS AND PRINCIPAL POLLUTANTS OF CONCERN

As operator of a Phase 1 MS4, the UG shall develop, implement, evaluate and modify, as necessary, a stormwater management plan, which includes practical and feasible BMPs and a monitoring program, to assess the effectiveness of the stormwater management activities and BMPs that have been implemented to attenuate the discharge of the Total Maximum Daily Loads (TMDL) regulated pollutants and Principal Pollutants of Concern (PPOC) identified in the UG's NPDES permit. Actions shall be taken to insure that the UG is in compliance with the following overall objectives:

- a. Develop and implement a stormwater management program, including specific BMPs, which will reduce the loading from the regulated TMDL pollutants.
- b. Develop and implement a program to monitor and collect stormwater samples at various intervals and frequencies identified in the NPDES permit.
- c. Develop and implement procedures to collect and analyze stormwater samples.
- d. Review data and determine water quality trends.

The UG continues to implement its Wet Weather Control Plan to reduce the number overflow events and the quantity of sanitary sewerage which enters the Kansas River during combined sewer overflow (CSO) and sanitary sewer overflow (SSO) events within the service area. The ongoing and future activities include studies to identify areas of overflows and their causes, and the construction of capital improvement projects to address overflows as a means to reduce the discharge of pollutants to the maximum extent practicable.

Best Management Practices (BMPs):

8.A BMP: To develop and implement Best Management Practices which will reduce TMDL regulated pollutants (Bacteria), to the maximum extent practicable, from entering the Kansas River.

Objective: To develop and implement BMP programs to reduce the amount of TMDL regulated parameters and Principal Pollutants of Concern that enter the Kansas River.

Measurable Goals:

8.A.1 The UG shall continue to implement the following BMPs:

- A pet waste brochure will be developed for public education and dissemination. The brochure will encourage pet owners to pick up the waste as well as provide other pollution prevention tips for pet owners. The brochure will be posted on the UG website and also be printed to be placed in City Hall, the public libraries, and other public venues, such as Community Centers and the Neighborhood Resource Center.

- Within the Kansas River drainage basin, priority attention will be given to regulating septic tank systems maintenance, installation, and usage. Response to complaints received regarding improper discharges or surfacing sewage related to septic system failures will be given top priority for investigation and response. Continue regulating septic systems in accordance with the UG's Code of Ordinances, Chapter 30, Article VII and maintain records of investigation and final disposition of non-compliant systems.
- The UG will continue the IDDE dry- weather inspection program required by BMP 3.E above to prioritize those drainage areas and streams within the Kansas River drainage basin. The UG will document and report all illicit discharges found and eliminated.

8.A.2 All activities, documents and reports for the BMPs identified above will be included in the UG's Annual Compliance Report to KDHE.

Responsible Department(s): Public Works, Public Relations

Compliance Schedule: –2016 - 2019

Recurrence: Continuous

Report(s): Copies of all brochures created and distributed, list of septic system complaints and disposition activities, and a summary of all illicit discharges inspected and eliminated.

Evaluation Methodology: Reduction in bacteria concentrations.

Affected Parameters: Bacteria (E. Coli)

8.B BMP: Undertake activities to reduce stormwater impacts on Wyandotte County Lake.

Objective: To implement and enforce best management practices within the lake's watershed, by reducing the discharge of pollutants, to the maximum extent practicable, in order to protect the integrity of Wyandotte County Lake. To assess the condition of the lake over the 5-year permit period.

8.B.1 The UG met the measurable goal to assess land use in the watershed of WYCO Lake, developed a baseline for existing build out conditions, included existing bathymetric and assembled the information in a technical memorandum as detailed in an Annual Report dated 2013.

8.B.2 The UG shall continue gathering and analyzing samples of the water in the southern and eastern tributaries entering the lake during four (4) wet weather events per year. Parameters tested shall include Total Phosphorus, total suspended solids (TSS), Total Nitrogen (calculated), TKN, nitrates + nitrites, ammonia, biochemical oxygen demand (BOD), and pH. Daily rainfall amounts from nearby rain gauges for the preceding two week period will be reported.

8.B.3 The UG shall continue to give high priority to sites located within the Wyandotte County Lake watershed when it comes to enforcing program elements and best management practices identified under the Construction Site Stormwater Run-off Control and Post-Construction Stormwater Management Program minimum control elements.

8.B.4 In 2017, the UG shall conduct a follow-up bathymetric survey of the lake. The UG will also undertake a land use and build-out assessment in the lake watershed to provide a comparison to the baseline data developed in the first year.

8.B.5 The UG shall continue to take Secchi disk depth readings at up to three (3) locations in the main body of the lake approximately one week before Memorial Day, Independence Day and Labor Day.

8.B.6 In 2017, the UG will develop a plan with a goal of determining significant sources of phosphorus that discharge to the MS4 with eventual discharges to the Lake. Options considered will include sampling selected: (i) streambed sediments; (ii) terrestrial sediments; and (iii) phosphorus concentrations at multiple stream locations. The UG may also run a Soil and Water Assessment Tool (SWAT) model. The options above, the SWAT model, and other alternatives may be considered at the UG's discretion.

8.B.7 In 2018, the UG will implement the plan.

8.B.8 In 2019, the UG will compose a technical memorandum containing the results of the analysis along with recommendations for how to address significant phosphorus sources to the MS4 with eventual discharges to the Lake to the MEP.

Responsible Department(s): Public Works, Water Pollution Control

Compliance Schedule: (8.B.1 thru 8.B.5) 2016 – 2017, (8.B.6 thru 8.B.8) 2017 - 2019

Recurrence: One Time (8.B.4, 8.B.6, 8.B.7), Continuously (8.B.2, 8.B.3 and 8.B.5)

Report(s): Provide a copy of the sampling results from the wet weather sampling program and Secchi disk depths. The UG will keep records on enforcement action and make these records available upon request. Provide a summary of the results of the bathymetric survey and land use assessment conducted during the fifth year. For 2017, provide a summary of the phosphorus source determination plan. For 2019, provide the technical memorandum described in 8.B.8 above.

Evaluation Methodology: Evaluate parameter, Secchi disk, and sediment data to determine the effect of BMPs on pollutants levels entering the lake. Modify program or develop additional best management practices in the area to continue protecting the lake quality. Evaluate effectiveness of plan chosen to assess significant sources of phosphorus to the Lake.

Affected Parameters: Nutrients

8.C BMP: Develop and implement Best Management Practices focused on the following watersheds: Kansas River watersheds specifically targeted for TMDL Regulated Pollutants of nutrients, sediment and bacteria: Little Turkey Creek and Brenner Heights Creek.

Objective: To develop and implement BMPs in order to reduce the amount of TMDL regulated pollutants (nutrients sediment and bacteria) entering Little Turkey Creek and Brenner Heights Creek from the MS4 to the MEP.

Measurable Goals:

8.C.1 Beginning in 2017, the UG will distribute pet waste brochures to be displayed at parks and public venues located in the above mentioned watersheds. The brochure may include information on the importance of properly disposing of pet waste along with other pet pollution prevention tips.

8.C.2 Beginning in 2017, the UG will distribute leaf litter brochures in residential areas and provide in UG owned public facilities located in the Brenner Heights Creek watershed. The brochure may contain information on how improperly disposed leaf litter leads to flooding, unpleasant smells, and degraded water quality as well as methods to dispose or reuse the leaf litter properly.

8.C.3 In 2017, the UG will conduct IDDE dry weather major outfall inspections as detailed in BMP 3.E with a focus on the outfalls draining into Little Turkey Creek and Brenner Heights Creek.

8.C.4 Beginning in 2018, the UG will install and maintain Pet Waste bags in parks in the TMDL identified watersheds if deemed necessary by the Parks and Recreation Director and Public Works Director. Replace or repair any pet waste bag distribution displays and dispensers, as needed.

Responsible Department(s): Public Works, Parks and Recreation

Compliance Schedule: 2017 - 2019

Recurrence: (8.C.1, 8.C.2, 8.C.4) Annually; (8.C.3) One Time

Report(s): Copies of the brochures, summary of bags and brochures distributed, and number of pet waste bag dispensers installed or repaired.

Evaluation Methodology: Evaluate the TMDL parameters reported in Wet Weather Monitoring for any significant changes in concentrations in nutrients, sediment and bacteria.

8.D BMP: Assess Best Management Practices focused on the following watersheds: Kansas River watersheds specifically targeted for TMDL Regulated Pollutants of nutrients, sediment and bacteria: Little Turkey Creek and Brenner Heights Creek

Objective: To assess BMPs that will reduce the amount of TMDL regulated pollutants (nutrients, sediment and bacteria) entering Little Turkey Creek and Brenner Heights Creek from the MS4 to the maximum extent practicable. Each watershed and pollutant contribution is unique to the watershed and information shall be gathered to determine:

- A) If pollutant loading concentrations justify BMP measures
- B) The most cost effective BMP to treat a particular pollutant
- C) Locations for sampling to assess effectiveness of BMPs

Measurable Goals:

8.D.1 Beginning in 2017, the UG will conduct an assessment of the potential pollutants present in each of the Little Turkey Creek and Brenner Heights Creek watersheds. The assessment will be a review of the watersheds for likely pollutant loadings, potential BMPs that will effectively address expected pollutant loadings, existing structural BMPs, whether additional sampling is necessary, and potential sites for gathering samples (if deemed necessary).

8.D.2 In 2018, the UG will utilize the sample analysis results obtained from Wet Weather Monitoring in 2016 and 2017 to make a preliminary assessment of the pollutant loadings in the Little Turkey Creek and Brenner Heights watersheds. The UG will use this data and the assessment of potential pollutants to target and prepare BMPs for addressing TMDL pollutants effectively.

8.D.3 In 2019, the UG will implement BMPs identified in 8.D.2. The 2016 and 2017 sample result averages for the regulated pollutants will be considered as a part of the analysis of an appropriate baseline for comparison of future sample results to determine effectiveness of the applied BMPs.

Responsible Department(s): Public Works, Water Pollution Control

Compliance Schedule: 2017 - 2019

Recurrence: Annually

Report(s): Summaries of the results of the completed tasks will be included in the Annual Report.

Evaluation Methodology: Evaluate the TMDL parameters for nutrients, sediment and bacteria reported in Wet Weather Monitoring for comparison.

9. WET WEATHER MONITORING PROGRAM

As operator of a Phase 1 MS4, the UG shall develop, implement, evaluate and modify, as necessary, a wet weather monitoring program for the Principal Pollutants of Concern (PPOCs) and other parameters listed in the current NPDES Permit to assess the effectiveness of the stormwater management activities and BMPs that have been implemented that comply with the following overall objectives:

- a. Develop and implement a program to monitor and collect storm water samples during wet weather at several outfall and stream locations.
- b. Develop and implement procedures to collect and analyze stormwater samples during wet weather.
- c. Review data and determine water quality trends.

Best Management Practices (BMPs):

9.A BMP: Implement SOPs to address monitoring of Principal Pollutants of Concern and other water quality parameters.

Objective: To implement SOPs which detail the implementation of a wet weather monitoring program and analysis of certain Principal Pollutants of Concern and specific parameters identified in the current NPDES permit.

Measurable Goals:

9.A.1 The UG met the measurable goal to implement the Applicable SOPs as detailed in an Annual Report dated 2013.

9.A.2 The UG met the measurable goal to review and update, if appropriate, the Applicable SOPs as detailed in an Annual Report dated 2014.

9.A.3 The UG shall provide a copy of the Monitoring Plan and data analysis procedures in its Annual Compliance Report to KDHE in the year in which the procedure was updated.

9.A.4 In 2016, the UG shall review the SOPs for monitoring and data analysis and incorporate any changes necessary to comply with the new permit. The UG shall prepare a technical memorandum detailing the results of the review. If UG deems it necessary, make modifications to the SOP following the evaluation process.

Responsible Department(s): Public Works, Water Pollution Control

Compliance Schedule: 2016-2019

Recurrence: One Time

Applicable Existing SOP: SWMP-15 (Wet Weather Monitoring Program – Wet Weather Monitoring); SWMP-16 (Wet Weather Monitoring Program – Data Analysis)

Report(s): Copies of procedures and the results of the review of the current Wet Weather Monitoring Plan.

Evaluation Methodology: As the overall program moves forward, annually review and refine if the UG deems it necessary, the developed SOPs to evaluate their capability to ensure consistency and accuracy in UG's sampling and analysis procedures.

9.B BMP: Develop a tracking system for wet weather monitoring activities.

Objective: To develop a system to track the results of the wet weather monitoring program.

Measurable Goals:

9.B.1 The UG met the measurable goal to develop a spreadsheet to track water quality results at each sample location as detailed in an Annual Report dated 2013.

Responsible Department(s): Public Works, Water Pollution Control

Compliance Schedule: N/A

Recurrence: Completed

Report(s): N/A

Evaluation Methodology: Review tracking system to ensure that the water quality results are clear, useful, and reliable. Make modifications to the system if appropriate.

9.C BMP: Conduct water quality analyses of stormwater discharges to assess the effectiveness of implemented BMPs and stormwater pollution prevention actions.

Objective: To review monitoring data for water quality trends and to analyze the information to determine the effectiveness of BMPs and the overall health of the watershed.

Measurable Goals:

9.C.1 The UG shall annually prepare a memorandum which includes an analysis of the monitoring results. The UG will provide an analysis and interpretation of the results of the effectiveness of the various BMPs and make adjustments if necessary.

9.C.2 The UG shall provide a copy of the data analysis in its Annual Compliance Report to KDHE.

9.C.3 The UG will continue analyzing samples gathered at currently active locations in accordance with **Part III Monitoring, Frequency and Periods** and the STANDARD CONDITIONS FOR KANSAS WATER POLLUTION CONTROL AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM MS4 GENERAL PERMITS.

9.C.4 In 2017 the UG will begin analyzing samples at the locations determined in 9.D.1 in accordance with the **Part III Monitoring, Frequency and Periods** and the STANDARD CONDITIONS FOR KANSAS WATER POLLUTION CONTROL AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM MS4 GENERAL PERMITS.

Responsible Department(s): Public Works

Compliance Schedule: –2016 - 2019

Recurrence: Annual (9.C.1, 9.C.2), Continuous (9.C.3, 9.C.4)

Report(s): Summary of water quality trend analysis memorandum. Summary of location assessment technical memorandum.

Evaluation Methodology: Evaluate trends to assess water quality impacts and review possible changes to BMPs and stormwater management activities to reduce PPOCs, and make modifications, if required.

9.D BMP: Perform sampling activities at Wet Weather Monitoring Sites.

Objective: To continue gathering samples at Wet Weather Monitoring sites.

Measurable Goals:

9.D.1 Beginning in 2016 the UG will conduct an assessment of the current Wet Weather Monitoring locations and determine where future samples will be taken. The UG will select eight (8) monitoring stations that will allow sampling and analysis of streams flowing within the permit area, discharges from MS4 Outfalls owned by the UG, and discharges from areas with BMPs within the permit area. In the event that data gathered over a four (4) year period demonstrates that the TMDL pollutants in the current watershed to the Kansas River are below levels of concern, the UG can reassess and relocate the sampling to a different MS4 watershed. The UG will note any changes in location in the Annual Report.

9.D.2 The UG will continue gathering samples at the six (6) currently active locations and at two (2) temporary locations in accordance with **Part III Monitoring, Frequency and Periods** and the STANDARD CONDITIONS FOR KANSAS WATER POLLUTION CONTROL AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM MS4 GENERAL PERMITS.

9.D.3 In 2017 the UG will begin analyzing samples at the eight (8) locations determined in 9.D.1 in accordance with the **Part III Monitoring, Frequency and Periods** and the STANDARD CONDITIONS FOR KANSAS WATER POLLUTION CONTROL AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM MS4 GENERAL PERMITS.

Responsible Department(s): Public Works, Water Pollution Control

Compliance Schedule: 2016 – 2019

Recurrence: One Time (9.D.1, 9.D.2), Continuous (9.D.3)

Report(s): N/A

Evaluation Methodology: Review sampling strategies, sample machine performance and acquisition by UG personnel. Make modifications to the system if appropriate.

10. STORMWATER MANAGEMENT PROGRAM

As operator of a Phase 1 MS4, the UG shall develop, implement, evaluate, and modify if necessary, a Stormwater Management Program to manage the activities and requirements, to the maximum extent practical, that reduce the discharge of pollutants to area streams, protect water quality and complies with the Clean Water Act, consistent with the following overall goals:

- a. Develop and implement a stormwater management program, including specific BMPs which will reduce the loading from the regulated and principal pollutants of concern.
- b. Establish a Stormwater Management Team that will oversee stormwater related activities and financial issues, provides guidance, and evaluates and recommends improvements to the program.
- c. Conduct watershed studies and a stormwater master plan to identify future capital improvement needs.

Best Management Practices (BMPs):

10.A BMP: Hire a Stormwater Coordinator.

Objective: Create and fill a new position whose primary responsibility will be to oversee the day to day operation of the Stormwater Management Program.

Measurable Goals:

10.A.1 The UG met the measurable goal to create the position of Stormwater Coordinator as detailed in an Annual Report dated 2013.

10.A.2 After the position is established, and contingent upon the availability and interest of qualified applicants, the UG shall fill the position of Stormwater Coordinator. It is expected that this position will occasionally be vacant due to staff turnover at the UG. During those periods, the UG will endeavor to name an individual to temporarily assume the responsibilities of this position until such time that an individual can be named to the position.

Responsible Department(s): Public Works, HR Dept.

Compliance Schedule: 2016 - 2019

Recurrence: When necessary

Report(s): Information on the staffing of this position will be included in the annual report.

Evaluation Methodology: N/A

10.B BMP: Create committees which will provide administrative oversight, coordination and direction for the UG's Stormwater Management Program.

Objective: To establish Committees to provide oversight and guidance during the implementation of the UG's Stormwater Management Program. The purpose of these committees shall be to develop a clear and consistent message regarding MS4 as it relates to overall program management, to help direct public education activities, to coordinate information tracking and mapping, and to oversee the good housekeeping measures implemented as part of this plan.

Measurable Goals:

10.B.1 The UG met the measurable goal to form a Stormwater Executive Committee as detailed in an Annual Report dated 2013.

10.B.2 Annually the Stormwater Executive Committee will consider the formation of additional committees to address public education, information tracking, mapping and good housekeeping measures.

10.B.3 For all committees, minutes will be prepared. Minutes will be retained for a minimum of three years, and will be provided to the public upon request.

Responsible Department(s): Public Works, Public Relations

Compliance Schedule: –2016 – 2019

Recurrence: Continuous

Report(s): N/A

Evaluation Methodology: The Public Works Director, or his designee, shall conduct an annual evaluation of the various Stormwater Committees to determine their effectiveness in implementing the UG's SMP.

10.C BMP: Conduct an annual financial analysis of the stormwater program.

Objective: To conduct an annual financial analysis which will assess the implementation costs of the UG's Stormwater Management Program and will consider the potential means for obtaining adequate funding.

Measurable Goals:

Stormwater Management Plan

10.C.1 The UG shall continue to conduct an analysis of the future program funding needs and expenses as well as assessing the availability of funds and revenue for the program as part of the annual budget development process. If future expenditures exceed revenue, recommendations will be identified to address the gap in funding to the maximum extent practicable.

10.C.2 A copy of the financial analysis will be included in the UG's Annual Compliance Report to KDHE.

Responsible Department(s): Public Works

Compliance Schedule: –2016 – 2019

Recurrence: Annually

Report: Copy of the financial analysis.

Evaluation Methodology: N/A